

Exercises ^[A]

Square:

- | | | |
|-------------|--------------|-------------------|
| 1. $x + y$ | 6. $3z + 2$ | 11. $3a - 2b$ |
| 2. $x + 6$ | 7. $2a + 7$ | 12. $6 - 5z$ |
| 3. $y - 5$ | 8. $3b - 8$ | 13. $-2 - x^2$ |
| 4. $2x + 1$ | 9. $x + 5y$ | 14. $4x^2 - 3y^2$ |
| 5. $2y - 1$ | 10. $1 + 2c$ | 15. $5a^2 - b$ |

Carry out the indicated operations:

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|-------------------|--------------------|--------------------------------|
| 16. $(x - 9y)^2$ | 26. $(13a - 1)^2$ | 35. $2(3a + 2b)^2$ |
| 17. $(1 - 3a)^2$ | 27. $(3m - 14n)^2$ | 36. $[2(3a + 2b)]^2$ |
| 18. $(-2 - 7c)^2$ | 28. $(2r + 15s)^2$ | 37. $-(x - 2y)^2$ |
| 19. $(-3 + 2x)^2$ | 29. $(17x + 2y)^2$ | 38. $-2(a - 6b)^2$ |
| 20. $(5x - 1)^2$ | 30. $(-3x - 7)^2$ | 39. $[3(2x - 1)]^2$ |
| 21. $(2x - y)^2$ | 31. $3(2x - 1)^2$ | 40. $2(3x - 1)^2$ |
| 22. $(a + 7)^2$ | 32. $4(2a + 5)^2$ | 41. $3(2x - 1)^2$ |
| 23. $(3a + 2b)^2$ | 33. $5(x - 2)^2$ | 42. $[3(x - 5y)]^2$ |
| 24. $(12x - 5)^2$ | 34. $[5(x - 2)]^2$ | 43. $[\frac{1}{2}(2x - 6y)]^2$ |
| 25. $(11x + 2)^2$ | | |

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CHAPTER 9

Which of the following are squares of binomials?

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|--------------------|-----------------------|------------------------|
| 44. $x^2 + 4x + 4$ | 47. $25c^2 - 10c + 1$ | 49. $4a^2 + 4a + 4$ |
| 45. $a^2 + 3a + 9$ | 48. $25z^2 + 20z + 4$ | 50. $b^2 - 2bc + 4c^2$ |
| 46. $1 + 2b + b^2$ | | |

51. Illustrate geometrically the fact that $(x + 5)(x + 3)$ is equivalent to $x^2 + 8x + 15$.
52. Write an expression for the area of a square of side $(x + 2)$ inches.
53. A square has area $(x^2 + 6x + 9)$ sq. in. Write an expression for the area of a square whose side is one inch shorter than a side of the given square.

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1. $x^2 + 2xy + y^2$
2. $x^2 + 12x + 36$
3. $y^2 - 10y + 25$
4. $4x^2 + 4x + 1$
5. $4y^2 - 4y + 1$
6. $9z^2 + 12z + 4$
7. $4a^2 + 28a + 49$
8. $9b^2 - 48b + 64$
9. $x^2 + 10xy + 25y^2$
10. $1 + 4c + 4c^2$
11. $9a^2 - 12ab + 4b^2$
12. $36 - 60z + 25z^2$
13. $4 + 4x^2 + x^4$
14. $16x^4 - 24x^2y^2 + 9y^4$
15. $25a^4 - 10a^2b + b^2$
16. $x^2 - 18xy + 81y^2$
17. $1 - 6a + 9a^2$
18. $4 + 28c + 49c^2$
19. $9 - 12x + 4x^2$
20. $25x^2 - 10x + 1$
21. $4x^2 - 4xy + y^2$
22. $a^2 + 14a + 49$
23. $9a^2 + 12ab + 4b^2$
24. $144x^2 - 120x + 25$
25. $121x^2 + 44x + 4$
26. $169a^2 - 28a + 1$
27. $9m^2 - 84mn + 196n^2$
28. $4r^2 + 60rs + 225s^2$
29. $289x^2 + 68xy + 4y^2$
30. $9x^2 + 42x + 49$
31. $12x^2 - 12x + 3$
32. $16a^2 + 80a + 100$
33. $5x^2 - 20x + 20$
34. $25x^2 - 100x + 100$
35. $18a^2 + 24ab + 8b^2$
36. $36a^2 + 48ab + 16b^2$
37. $-x^2 + 4xy - 4y^2$
38. $-2a^2 + 24ab - 72b^2$
39. $36x^2 - 36x + 9$
40. $18x^2 - 12x + 2$
41. $12x^2 - 12x + 3$
42. $9x^2 - 90xy + 225y^2$
43. $x^2 - 6xy + 9y^2$
44. Square of binomial
45. Not square of binomial
46. Square of binomial
47. Square of binomial
48. Square of binomial
49. Not square of binomial
50. Not square of binomial
52. $(x^2 + 4x + 4)$ sq.in.
53. $(x^2 + 4x + 4)$ sq.in.